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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

re Application of:

BLACKBURN et al.

Serial No. 09/440,371

Filed: November 12, 1999

For: BINDING ACCELERATION  
TECHNIQUES FOR THE  
DETECTION OF ANALYTES

Examiner: Not Yet Assigned

Group Art Unit: 1643

CERTIFICATE OF MAILING

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Christine P. Peters

Christine P. Peters

SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT  
AND  
STATEMENT OF RELATEDNESS

Assistant Commissioner  
for Patents  
Washington, DC 20231

Sir:

In satisfaction of the duty of disclosure under 37 C.F.R. § 1.56, and in accordance with the provisions of 37 C.F.R. §§ 1.97 and 1.98, Applicant wishes to draw the attention of the U.S. Patent and Trademark Office to the references cited on the accompanying form I TO-1449. Copies of the references are enclosed.

With respect to patent applications, the applicants point out their duty under M.P.E.P. §2001.06(b) to disclose relevant patent applications of which they are aware. To this end, the applicants draw the Examiner's attention to the following patent applications;

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TC 1449

**Serial No.:** 09/440,371  
**Filed:** November 12, 1999

1. U.S.S.N. 09/134,058, filed August 14, 1998, now Patent Number 6,290,839; U.S.S.N. 09/338,726, filed June 23, 1999, now Patent Number 6,264,825; U.S.S.N. 09/520,477, filed March 8, 2000; and U.S.S.N. 09/712,792, filed November 13, 2000.
2. United States Serial Number 08/743,798, filed November 5, 1996, now Patent Number 6,096,273; U.S.S.N. 08/873,978, filed June 12, 1997; U.S.S.N. 08/899,510, July 24, 1997, now Patent Number 6,221,583; U.S.S.N. 08/911,085, filed August 14, 1997, now Patent Number 6,090,933; U.S.S.N. 09/557,577, filed April 21, 2000; and U.S.S.N. 09/577,429, filed May 22, 2000.
3. U.S.S.N. 08/873,597, filed June 12, 1997; U.S.S.N. 08/911,589, filed August 14, 1997, now Patent Number 6,232,062; and U.S.S.N. 09/660,374, filed September 12, 2000.
4. U.S.S.N. 09/096,593, filed June 12, 1998.
5. U.S.S.N. 08/873,977, filed June 12, 1997, now Patent Number 6,013,459; 09/096,504, filed June 12, 1998, now Patent Number 6,013,170; U.S.S.N. 09/417,988, filed October 13, 1999, now Patent Number 6,248,229; U.S.S.N. 09/841,809, filed April 24, 2001.
6. U.S.S.N. 09/397,957, filed September 17, 1999.
7. U.S.S.N. 09/014,304, filed January 27, 1998, now Patent Number 6,063,573.
8. U.S.S.N. 09/135,183, filed August 17, 1998.
9. U.S.S.N. 09/306,653, filed May 6, 1999 and U.S.S.N. 09/452,277, filed February 3, 1999.
10. U.S.S.N. 09/428,155, filed October 27, 1999.
11. U.S.S.N. 09/295,691, filed April 21, 1999.
12. U.S.S.N. 09/472,657, filed December 27, 1999.
13. U.S.S.N. 09/245,105, filed January 27, 1999.

**Serial No.:** 09/440,371  
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14. U.S.S.N. 08/166,036, filed December 10, 1993, now Patent Number 5,591,578; U.S.S.N. 08/475,051, filed June 7, 1995, now Patent Number 5,824,473; U.S.S.N. 08/660,534, filed June 7, 1995, now Patent Number 5,770,369; U.S.S.N. 08/659,987, filed June 7, 1996, now abandoned; U.S.S.N. 08/709,265, filed September 6, 1996, now Patent Number 5,705,348; U.S.S.N. 08/709,263, filed September 6, 1996, now Patent Number 5,780,235; U.S.S.N. 08/873,598, filed June 12, 1997, now Patent Number 5,952,172; U.S.S.N. 08/946,679, filed October 8, 1997, now Patent Number 6,087,100; U.S.S.N. 09/100,507, filed June 19, 1998, now Patent Number 6,071,699; U.S.S.N. 09/306,749, filed May 7, 1999; U.S.S.N. 09/306,737, filed May 7, 1999, now Patent Number 6,177,250; U.S.S.N. 09/306,768, filed May 7, 1999, now Patent Number 6,277,576; U.S.S.N. 09/454,498, filed December 6, 1999, now Patent Number 6,268,149; U.S.S.N. 09/459,751, filed December 10, 1999, now Patent Number 6,268,150; U.S.S.N. 09/459,191, filed December 10, 1999, now Patent Number 6,180,352; U.S.S.N. 09/454,497, filed December 6, 1999, now Patent Number 6,200,761; U.S.S.N. 09/458,187, filed December 8, 1999, now Patent Number 6,238,870; U.S.S.N. 09/545,227, filed April 7, 2000, now Patent Number 6,258,545; and U.S.S.N. 09/602,618, filed June 22, 2000; U.S.S.N. 09/845,746, filed April 30, 2001; and U.S.S.N. 09/866,067, filed May 23, 2001.

15. U.S.S.N. 09/238,351, filed January 27, 1999 and 09/621,275 filed July 20, 2000.

None of the foregoing references are believed to disclose the invention as claimed. Nothing herein shall constitute an admission concerning the contents of any of the cited references, nor shall the inclusion of a reference herein be considered an admission that the reference constitutes prior art against the invention claimed in the above-identified application.

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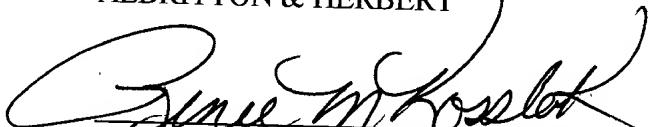
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This Information Disclosure Statement is being filed within three months of the filing date of a national application, within three months of the date of entry of a national stage, or before the mailing date of a first Office Action on the merits, 37 C.F.R. § 1.97(b), and therefore no fee is required. The Commissioner is authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. 06-1300 (Our Order No. A-66566-3/RFT/RMS/RMK).

Respectfully submitted,

FLEHR, HOHBACH, TEST,  
ALBRITTON & HERBERT

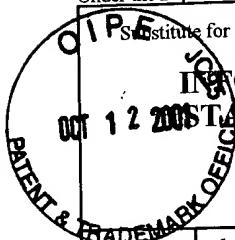
Dated: 10/18/01

  
Renee M. Kossak, Reg. No. 47,717 for  
Robin M. Silva, Reg. No. 38,304

Four Embarcadero Center  
Suite 3400  
San Francisco, CA 94111-4187  
Telephone: (415) 781-1989

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INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT

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Sheet

1

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)		Application Number	09/440,371
		Filing Date	November 12, 1999
		First Named Inventor	BLACKBURN et al.
		Group Art Unit	1643
		Examiner Name	Not Yet Assigned
		Attorney Docket Number	A-66566-3/RFT/RMS/RMK

## U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No. <sup>1</sup>	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number	Kind Code <sup>2</sup> (if known)			
1	4,704,193			Bowers et al.	11/1987	
2	4,945,045			Forrest et al.	07/1990	
3	5,089,112			Skotheim et al.	02/1992	
4	5,180,968			Bruckensteine et al.	01/1993	
5	5,242,828			Bergstrom et al.	09/1993	
6	5,356,786			Heller et al.	10/1994	
7	5,391,272			O'Daly et al.	02/1995	
8	5,436,161			Bergstrom et al.	07/1995	
9	5,443,701			Willner et al.	08/1995	
10	5,552,270			Khrapko et al.	9/1996	
11	5,700,667			Marble et al.	12/1997	
12	5,741,700			Ershov et al.	4/1998	
13	5,756,050			Ershov et al.	5/1998	
14	5,770,721			Ershov et al.	6/1998	

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		Office <sup>3</sup>	Number <sup>4</sup>				
15	WO	86/05815	A1	Genetics International Inc.	3/1985		
16	WO	97/31256	A3	Cornell Research Found.	08/1997		
17	WO	97/44651	A1	Australian Membrane and Biotechnology Research Institute	11/1997		
18	WO	97/27329	A1	Univ. of Chicago	7/1997		
19	WO	97/41425	A1	Pence Inc.	11/1997		
20	WO	98/27229	A1	Univ. of Chicago	6/1998		
21	WO	98/28444	A2	Univ. of Chicago	7/1998		
22	WO	98/51823	A1	Mosaic Technologies	11/1998		

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Sheet <u>2</u>		of	5														
<p><i>Complete if Known</i></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">Application Number</td> <td>09/440,371</td> </tr> <tr> <td>Filing Date</td> <td>November 12, 1999</td> </tr> <tr> <td>First Named Inventor</td> <td>BLACKBURN et al.</td> </tr> <tr> <td>Group Art Unit</td> <td>1643</td> </tr> <tr> <td>Examiner Name</td> <td>Not Yet Assigned</td> </tr> <tr> <td>Attorney Docket Number</td> <td>A-66566-3/RFT/RMS/RMK</td> </tr> </table>						Application Number	09/440,371	Filing Date	November 12, 1999	First Named Inventor	BLACKBURN et al.	Group Art Unit	1643	Examiner Name	Not Yet Assigned	Attorney Docket Number	A-66566-3/RFT/RMS/RMK
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23	5,795,453			Gilmartin	08/1998	
24	5,824,473			Meade et al.	10/1998	
25	5,837,859			Teoule et al.	11/1998	
26	5,849,486			Heller et al.	12/1998	
27	5,851,772			Mirzabekov et al.	12/1998	
28	5,952,172			Meade et al.	09/1999	
29	6,060,023			Maracas	05/2000	
30	6,060,327			Keen	05/2000	
31	6,096,273			Kayyem et al.	08/2000	
32	6,071,699			Meade et al.	06/2000	
33	6,087,100			Meade et al.	07/2000	
34	6,096,825			Garnier et al.	08/2000	
35	6,107,080			Lennox	08/2000	
36	6,177,250			Meade et al.	01/2001	
37	6,180,352			Meade et al.	01/2001	
38	6,238,870			Meade et al.	05/2001	
39	6,200,761			Meade et al.	03/2001	
40	5,194,133			Clark et al.	03/1993	
41	5,728,532			Ackley	03/1998	
42	5,785,789			Gagnon et al.	07/1998	
43	5,945,286			Krihak et al.	03/1993	

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44	WO	98/57159	A1	Clinical Micro Sensors, Inc.	6/1997	
45	WO	98/57319	A1	Clinical Micro Sensors, Inc.	11/1999	
46	WO	99/29711	A1	Nanogen Inc.	06/1999	
47	WO	99/67425	A2	Clinical Micro Sensors, Inc.	12/1999	
48	WO	99/37819	A2	Clinical Micro Sensors, Inc.	07/1999	
49	JP	6-41183	A2	Mitsubishi Chem Ind.	1997	

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Examiner Name	Not Yet Assigned
Attorney Docket Number	A-66566-3/RFT/RMS/RMK

## OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS

TRADEMARK OFFICE Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
	63	Blonder et al., "Three-dimensional Redox-Active layered Composites of Au-Au, Ag-Ag and Au-Ag Colloids," Chem. Commun. 1393-1394 (1998).	
	64	Boon et al., "Mutation Detection by Electrocatalysis at DNA- Modified Electrodes," Nature Biotechnology, 18: 1096-1100 (October 2000).	
	65	Drobyshev, A. et al., "Sequence Analysis by Hybridization with Oligonucleotide Microchip: Identification of $\beta$ -thalassemia Mutations," Gene, 188:45-52 (1997).	
	66	Dubiley, S. et al., "Fractionation, phosphorylation and Ligation on Oligonucleotide Microchips to Enhance Sequencing by Hybridization," Nucleic Acids Research, 25(12):2259-2265 (1997).	
	67	Elghanian et al., "Selective Colorimetric Detection of Polynucleotides Based on the Distance-Dependent Optical Properties of Gold Nanoparticles," Science, 277:1078-1081 (1997).	
	68	Fotin, A. et al., "Parallel Thermodynamic Analysis of Duplexes on Oligodeoxyribonucleotide Microchips," Nucleic Acids Research, 216(6):1515-1521 (1998).	
	69	Guschin, D. et al., "Manual Manufacturing of Oligonucleotide, DNA, and Protein Microchips," Analytical Biochemistry, 250:203-211 (1997).	
	70	Guschin, D. et al., "Oligonucleotide Microchips as Genosensors for Determinative and Environmental Studies in Microbiology," 63(6):2397-2402 (1997).	
	71	Hess et al., "Base Pairing Properties of Novel Transition Metal PNA Conjugates," Journal of Inorganic Biochemistry, 74:161 (1999).	
	72	Kamat et al., J. Phys. chem., 93(4):1405-1409 (1989).	
	73	Livshits, M. et al., "Theoretical Analysis of the Kinetics of DNA Hybridization with Gel-Immobilized Oligonucleotides," Biophysical Journal, 71:2795-2801 (1996).	
	74	Mirkin et al., "A DNA-based Method for Ratioally Assembling Nonoparticles into Macroscopic Materials," Nature, 382:607-609 (1996).	
	75	Mirzabekov, A. et al., "DNA Sequencing by Hybridization - a Megasequencing Method and a Diagnostic Tool," Tibtech, 12:27-32 (1994).	
	76	Mitchell et al., "Programmed Assembly of DNA Functionalized Quantum Dots," J. Am. Chem. Soc., 121:8122-8123 (1999).	
	77	Mucic et al., "DNA-Directed Synthesis of Binary Nanoparticle Network Materials," J. Am. Chem. Soc., 120:12674-12675 (1998).	

Examiner Signature		Date Considered
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Sheet 5 of 5

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